University of Iowa Health Care

Presentation to
The Board of Regents, State of Iowa
October 22-23, 2014

- Opening Remarks (Robillard)

- Operating and Financial Performance (Kates, Fisher)

- Strategic Plan Update (Robillard)

- Faculty Presentation: The Beginning of the End of Preeclampsia (Schwinn, Santillan, Grobe)

Opening Remarks

Jean Robillard, MD
Vice President for Medical Affairs

Operating and Financial Performance Update

Ken Kates, Chief Executive Officer
UI Hospitals & Clinics

Ken Fisher, Associate Vice President for Finance
and Chief Financial Officer

Volume Indicators
Fiscal Year to Date July 2014

UNIVERSITY OF IOWA HEALTH CARE

Operating Review (YTD)	Actual	Budget	Prior Year *	Variance to Budget	% Variance to Budget		Variance to Prior Year	% Variance to Prior Year	
Discharges	2,586	2,671	2,542	(85)	-3.2%	🔴	44	1.7%	⚪
Patient Days	16,331	16,893	16,469	(562)	-3.3%	🔴	(138)	-0.8%	⚪
Length of Stay	6.30	6.21	6.37	0.09	1.3%	⚪	(0.07)	-1.1%	⚪
Average Daily Census	526.80	544.94	531.28	-18.14	-3.3%	🔴	-4.48	-0.8%	⚪
Total Surgeries	2,940	2,414	2,539	76	3.1%	🟢	(49)	-1.9%	⚪
- Inpatient	971	943	995	28	3.0%	🟢	(24)	-2.4%	⚪
- Outpatient	1,519	1,471	1,544	48	3.2%	🟢	(25)	-1.6%	⚪
ED Visits	4,723	4,720	5,361	3	0.1%	⚪	(638)	-11.9%	🔴
Total Clinic Visits	67,299	65,385	67,090	1,914	2.9%	🟢	209	0.3%	⚪

*   from ongoing operations

🟢 Greater than 2.5% Favorable	⚪ Neutral	🔴 Greater than 2.5% Unfavorable	

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Discharges by Type
Fiscal Year to Date July 2014

Operating Review (YTD)	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget		Variance to Prior Year	% Variance to Prior Year	
Adult Medical	766	826	789	(60)	-7.3%	🔴	(23)	-2.9%	🔴
Adult Surgical	1,295	1,355	1,288	(60)	-4.4%	🔴	7	0.5%	⚪
Adult Psych	120	109	104	11	10.1%	🟢	16	15.4%	🟢
Subtotal – Adult	*2,181*	*2,290*	*2,181*	*(109)*	*-4.8%*	🔴	*0*	*0.0%*	⚪
Pediatric Medical & Surgical	277	258	243	19	7.4%	🟢	34	14.0%	🟢
Pediatric Critical Care	64	71	68	(7)	-9.9%	🔴	(4)	-5.9%	🔴
Pediatric Psych	64	52	50	12	23.1%	🟢	14	28.0%	🟢
Subtotal – Pediatrics w/o newborn	*405*	*381*	*361*	*24*	*6.3%*	🟢	*44*	*12.2%*	🟢
Newborn	139	133	137	6	4.5%	🟢	2	1.5%	⚪
TOTAL w/o Newborn	**2,586**	**2,671**	**2,542**	**(85)**	**-3.2%**	🔴	**44**	**1.7%**	⚪

🟢	⚪	🔴
Greater than 2.5% Favorable	**Neutral**	**Greater than 2.5% Unfavorable**

Discharge Days by Type
Fiscal Year to Date July 2014

UNIVERSITY OF IOWA
HEALTH CARE

Operating Review (YTD)	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget		Variance to Prior Year	% Variance to Prior Year	
Adult Medical	4,233	4,084	3,984	149	3.7%	🟢	249	6.3%	🟢
Adult Surgical	6,544	6,549	6,382	(5)	-0.8%	⚪	162	2.5%	🟢
Adult Psych	1,862	1,869	1,823	(7)	-0.4%	⚪	39	2.1%	⚪
Subtotal – Adult	*12,639*	*12,502*	*12,189*	*137*	*1.1%*	⚪	*450*	*3.7%*	🟢
Pediatric Medical & Surgical	1,371	1,558	1,516	(187)	-12.0%	🔴	(145)	-9.6%	🔴
Pediatric Critical Care	1,713	2,001	1,952	(288)	-14.4%	🔴	(239)	-12.2%	🔴
Pediatric Psych	561	539	526	22	4.1%	🟢	35	6.7%	🟢
Subtotal – Pediatrics w/o newborn	*3,645*	*4,098*	*3,994*	*(453)*	*-11.1%*	🟢	*(349)*	*-8.7%*	🔴
Newborn	311	286	309	25	8.7%	🟢	2	0.7%	⚪
TOTAL w/o Newborn	**16,284**	**16,600**	**16,183**	**(316)**	**-1.9%**	⚪	**101**	**0.6%**	⚪

🟢 Greater than 2.5% Favorable   ⚪ Neutral   🔴 Greater than 2.5% Unfavorable

Length of Stay Index – Adult Medical(*)
August 2011 through July 2014

UNIVERSITY OF IOWA
HEALTH CARE

Legend: ADULT MEDICAL, UCL, LCL, MEAN, GOAL, Linear (ADULT MEDICAL)
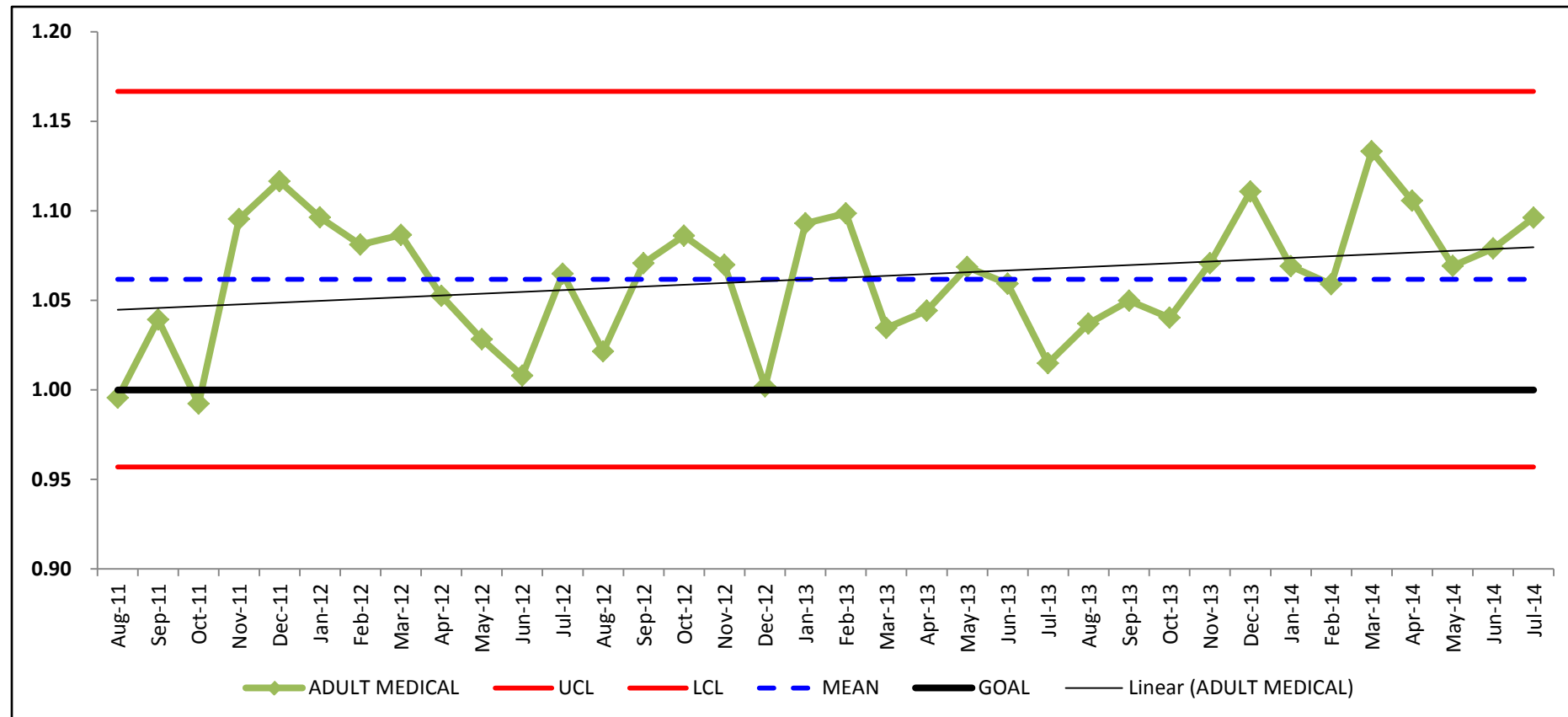
(*) excludes outliers

Length of Stay Index – Adult Surgical(*)
August 2011 through July 2014
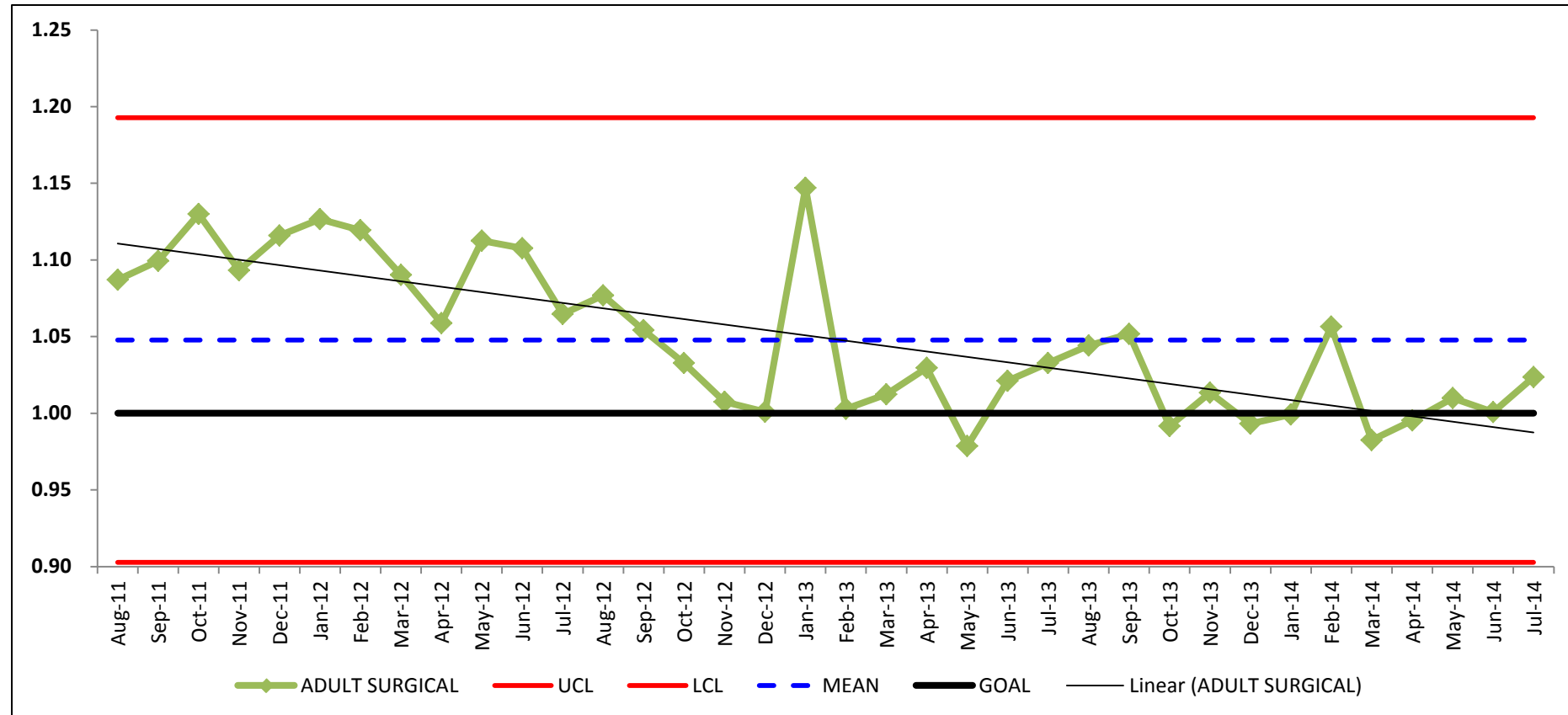
(*) excludes outliers

Length of Stay Index – Pediatric Medical(*)
August 2011 through July 2014

UNIVERSITY OF IOWA
HEALTH CARE

Legend: PEDIATRIC MEDICAL — UCL — LCL — MEAN — GOAL — Linear (PEDIATRIC MEDICAL)
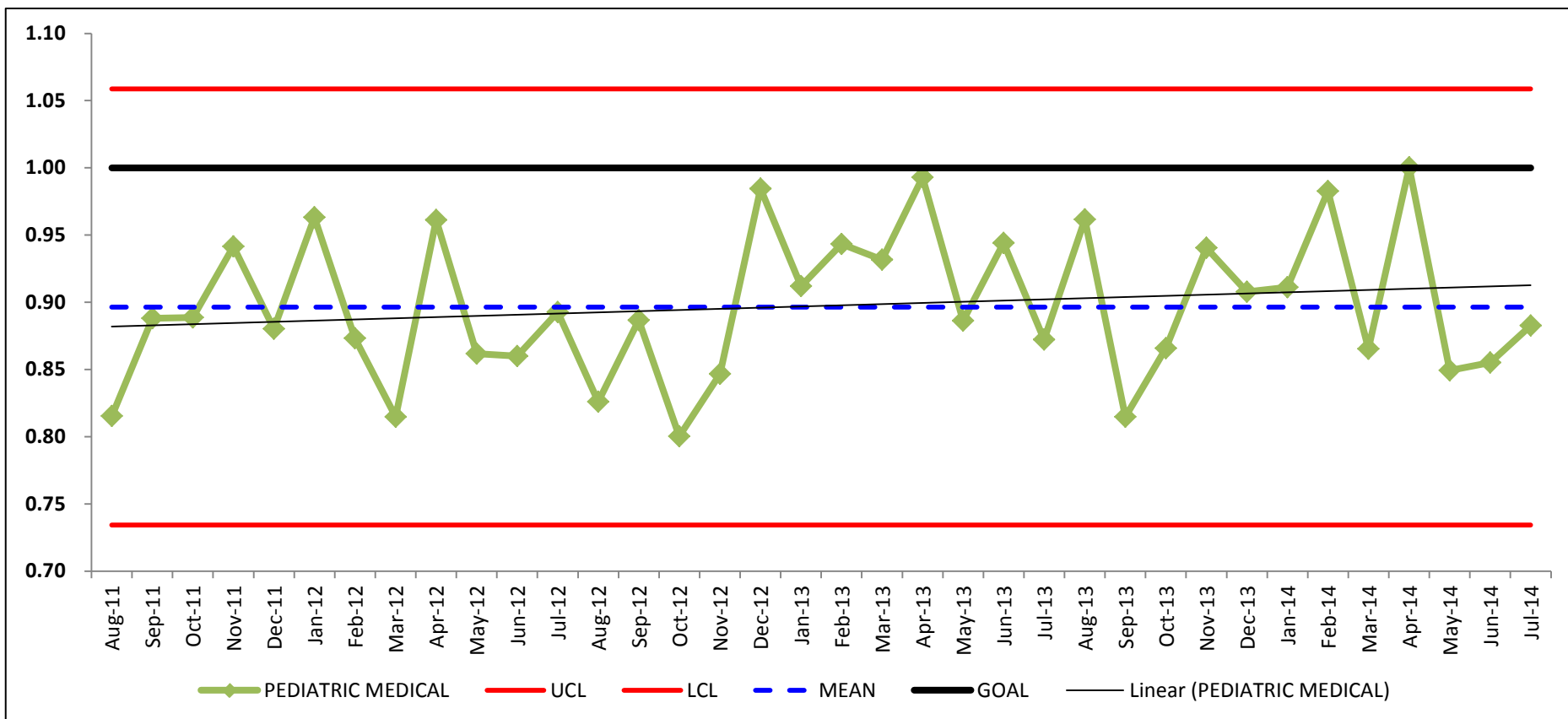
(*) excludes outliers

Length of Stay Index – Pediatric Surgical(*)
August 2011 through July 2014

(*) excludes outliers

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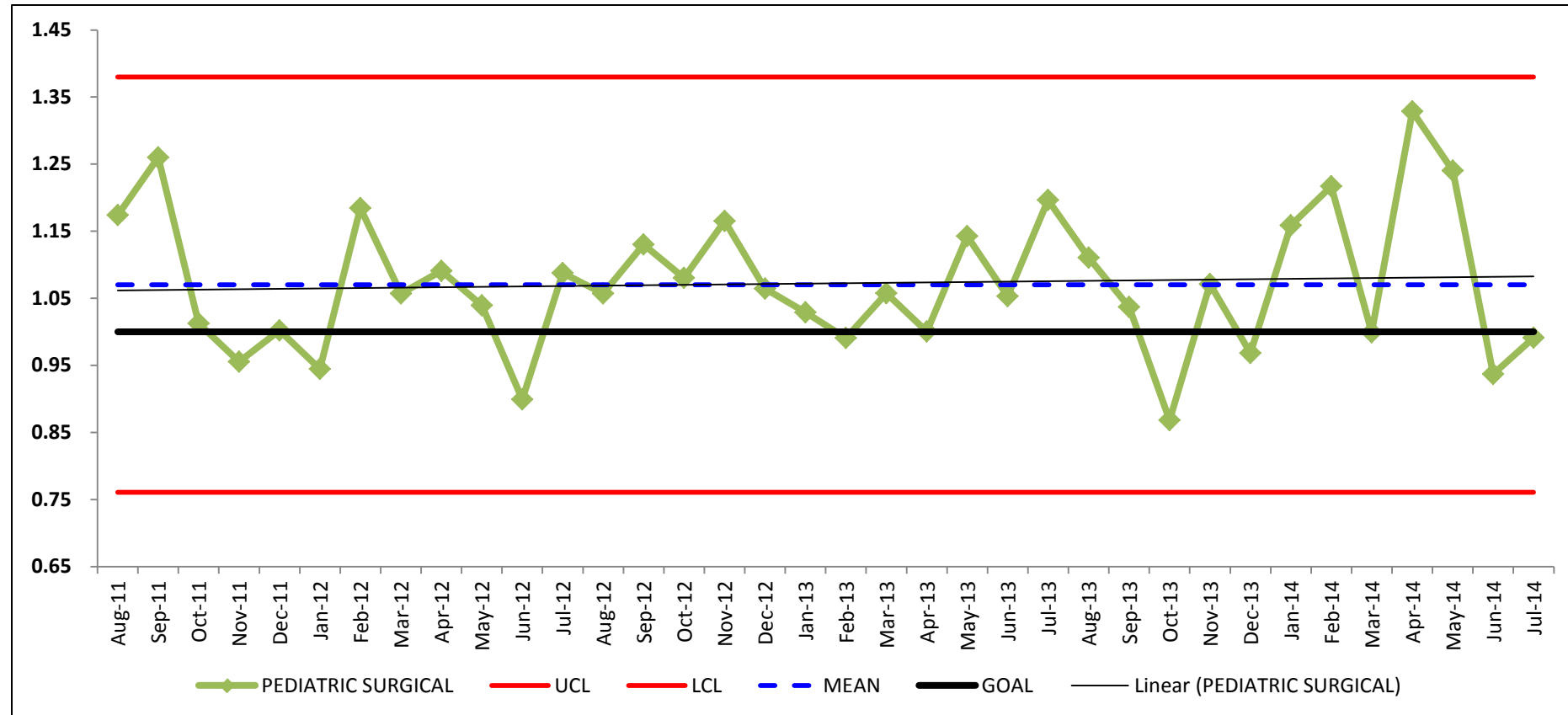
Length of Stay Index – Normal Newborn(*)
August 2011 through July 2014

Legend: NORMAL NEWBORN — UCL — LCL — MEAN — GOAL — Linear (NORMAL NEWBORN)

(*) excludes outliers

Inpatient Surgeries – by Clinical Department
Fiscal Year to Date July 2014

UNIVERSITY OF IOWA
HEALTH CARE

Operating Review (YTD)	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget		Variance to Prior Year	% Variance to Prior Year	
Cardiothoracic	88	82	93	6	7.9%	🟢	(5)	-5.4%	🔴
Dentistry	14	15	17	(1)	-7.0%	🔴	(3)	-17.6%	🔴
General Surgery	251	271	296	(20)	-7.5%	🔴	(45)	-15.2%	🔴
Gynecology	73	53	49	20	37.8%	🟢	24	49.0%	🟢
Neurosurgery	155	140	147	15	10.8%	🟢	8	5.4%	🟢
Ophthalmology	7	10	18	(3)	-30.9%	🔴	(11)	-61.1%	🔴
Orthopedics	250	237	238	13	5.7%	🟢	12	5.0%	🟢
Otolaryngology	51	53	47	(2)	-4.2%	🔴	4	8.5%	🟢
Radiology – Interventional	3	7	10	(4)	-58.1%	🔴	(7)	-70.0%	🔴
Urology *w/ Procedure Ste.*	79	75	80	4	5.4%	🟢	(1)	-1.3%	🔴
Total	**971**	**943**	**995**	**28**	**3.0%**	🟢	**(24)**	**-2.4%**	⚪

Solid Organ Transplants	25	33	26	(83)	-21.6%	🔴	(45)	-13.0%	🔴

🟢 Greater than 2.5% Favorable   ⚪ Neutral   🔴 Greater than 2.5% Unfavorable

Outpatient Surgeries – by Clinical Department
Fiscal Year to Date July 2014

UNIVERSITY OF IOWA
HEALTH CARE

Operating Review (YTD)	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget		Variance to Prior Year	% Variance to Prior Year	
Cardiothoracic	9	6	9	3	50.0%	🟢	0	0.0%	⚪
Dentistry	56	58	53	(2)	-3.1%	🔴	3	5.7%	🟢
Dermatology	0	3	5	(3)	-100.0%	🔴	(5)	-100.0%	🔴
General Surgery	250	237	261	13	5.3%	🟢	(11)	-4.2%	🔴
Gynecology	61	68	64	(7)	-9.9%	🔴	(3)	-4.7%	🔴
Internal Medicine	1	0	1	1	100.0%	🟢	0	0.0%	⚪
Neurosurgery	68	63	53	5	7.5%	🟢	15	28.3%	🟢
Ophthalmology	331	306	381	25	8.2%	🟢	(50)	-13.1%	🔴
Orthopedics	340	341	345	(1)	-0.4%	⚪	(5)	-1.4%	⚪
Otolaryngology	210	205	187	5	2.5%	🟢	23	12.3%	🟢
Pediatrics	0	0	0	0	0.0%	⚪	0	0.0%	⚪
Radiology – Interventional	0	2	4	(2)	-100.0%	🔴	(4)	-100.0%	🔴
Urology *w/ Procedure Ste.*	193	181	181	12	6.4%	🟢	12	6.6%	🟢
Total	**1,519**	**1,471**	**1,544**	**48**	**3.2%**	🟢	**(25)**	**-1.6%**	⚪

🟢 Greater than 2.5% Favorable ⚪ Neutral 🔴 Greater than 2.5% Unfavorable

Emergency Department
Fiscal Year to Date July 2014

Operating Review (YTD)	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget	Variance to Prior Year	% Variance to Prior Year
ED Visits	4,723	4,720	5,361	3	0.1% ○	(638)	-11.9% 🔴
ED Admits	1,564	1,391	1,580	173	12.4% 🟢	(16)	-1.0% ○
ED Conversion Factor	33.1%	29.5%	29.5%		12.4% 🟢		12.4% 🟢
ED Admits / Total Admits	59.3%	51.2%	61.0%		15.9% 🟢		-2.8% 🔴

🟢	○	🔴
Greater than 2.5% Favorable	**Neutral**	**Greater than 2.5% Unfavorable**

Clinic Visits by Specialty
Fiscal Year to Date July 2014

UNIVERSITY OF IOWA HEALTH CARE

Operating Review (YTD)	Actual	Budget	Variance to Budget	% Variance to Budget	
Burn Clinic	318	289	29	10.0%	🟢
Center for Disabilities & Development	709	821	(112)	-13.6%	🔴
Center for Digestive Disease	1,461	1,536	(75)	-4.9%	🔴
Clinical Cancer Center	4,201	4,456	(255)	-5.7%	🔴
Dermatology	1,695	1,781	(86)	-4.8%	🔴
General Surgery	1,275	1,474	(199)	-13.5%	🔴
Hospital Dentistry	1,265	1,301	(36)	-2.8%	🔴
Internal Medicine	2,816	2,612	204	7.8%	🟢
Neurology	1,057	862	195	22.6%	🟢
Neurosurgery	951	674	277	41.1%	🟢
Obstetrics/Gynecology	4,350	4,187	163	3.9%	🟢
Ophthalmology	5,493	5,521	(28)	-0.5%	⚪
Orthopedics	6,110	5,752	358	6.2%	🟢
Otolaryngology	1,658	1,483	175	11.8%	🟢
Pediatrics	4,903	4,797	106	2.2%	⚪
Primary Care (non-IRL)	13,453	11,670	1,783	15.3%	🟢
Psychiatry	2,635	2,710	(75)	-2.8%	🔴
Urology	996	1,222	(226)	-18.5%	🔴
UI Heart Center	1,477	1,500	(23)	-1.5%	⚪
IRL	10,476	10,737	(261)	-2.4%	⚪
Total	**67,299**	**65,385**	**1,914**	**2.9%**	🟢

🟢 **Greater than 2.5% Favorable**   ⚪ **Neutral**   🔴 **Greater than 2.5% Unfavorable**

Clinic Visits by Location
Fiscal Year to Date July 2014

Operating Review (YTD)	FY15 Actual				FY14 Actual *				Variance to Prior Year	%
	On-Site	IRL	UICMS & QuickCare	Total	On-Site	IRL	UICMS & QuickCare	Total		
Primary Care	4,491		8,962	13,453	4,518		8,793	13,311	142	1.1% ○
General Internal Medicine		2,265		2,265		2,153		2,153	112	5.2% 🟢
Pediatrics		1,980		1,980		1,655		1,655	325	19.6% 🟢
Subtotal - Primary Care	*4,491*	*4,245*	*8,962*	*17,698*	*4,518*	*3,808*	*8,793*	*17,119*	*579*	*3.4%* 🟢
Burn Clinic	318			318	244			244	74	30.3% 🟢
Center for Disabilities & Development	709			709	757			757	(48)	-6.3% 🔴
Center for Digestive Disease	1,461	301		1,762	1,781	212		1,993	(231)	-11.6% 🔴
Clinical Cancer Center	4,201			4,201	4,791			4,791	(590)	-12.3% 🔴
Dermatology	1,695	509		2,204	1,582	450		2,032	172	8.5% 🟢
General Surgery	1,275			1,275	1,479			1,479	(204)	-13.8% 🔴
Hospital Dentistry	1,265			1,265	1,480			1,480	(215)	-14.5% 🔴
Internal Medicine	2,816	649		3,465	3,040	199		3,239	226	7.0% 🟢
Neurology	1,057			1,057	890			890	167	18.8% 🟢
Neurosurgery	951			951	1,013			1,013	(62)	-6.1% 🔴
Obstetrics/Gynecology	4,350	2,031		6,381	4,452	1,622		6,074	307	5.1% 🟢
Ophthalmology	5,493	798		6,291	5,946	654		6,600	(309)	-4.7% 🔴
Orthopedics	6,110	34		6,144	5,821			5,821	323	5.6% 🟢
Otolaryngology	1,658	487		2,145	1,687	497		2,184	(39)	-1.8% ○
Pediatrics	4,903			4,903	4,635			4,635	268	5.8% 🟢
Psychiatry	2,635			2,635	2,845			2,845	(210)	-7.4% 🔴
Urology	996	494		1,490	1,258	457		1,715	(225)	-13.1% 🔴
UI Heart Center	1,477	928		2,405	1,304	875		2,179	226	10.4% 🟢
Subtotal – Specialty Care	*43,370*	*6,231*		*49,601*	*45,005*	*4,966*		*49,971*	*(370)*	*-0.7%* ○
Total	**47,861**	**10,476**	**8,962**	**67,299**	**49,523**	**8,774**	**8,793**	**67,090**	**209**	**0.3%** ○

* from ongoing operations

🟢 Greater than 2.5% Favorable   ○ Neutral   🔴 Greater than 2.5% Unfavorable

Iowa River Landing Ambulatory Visits
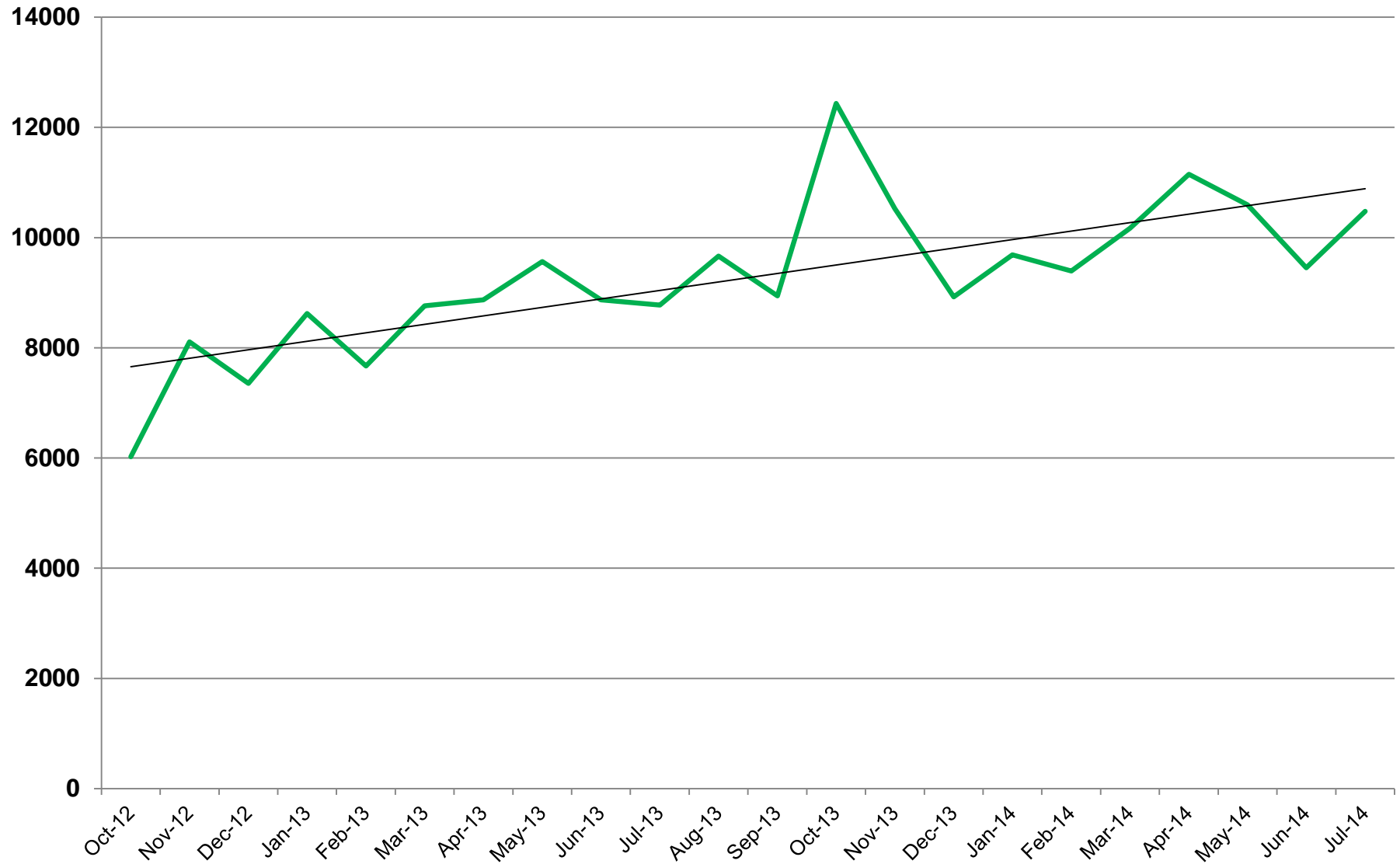
	June 30, 2013	June 30, 2014 (preliminary)	July 31, 2014
Net Accounts Receivable	$161,942,694	$176,898,224	$172,075,267
Net Days in AR	54	54	51

Days of Revenue in Net A/R

MEDIAN (51) Moody's Aa2 Rating

Bad Debts ($M)
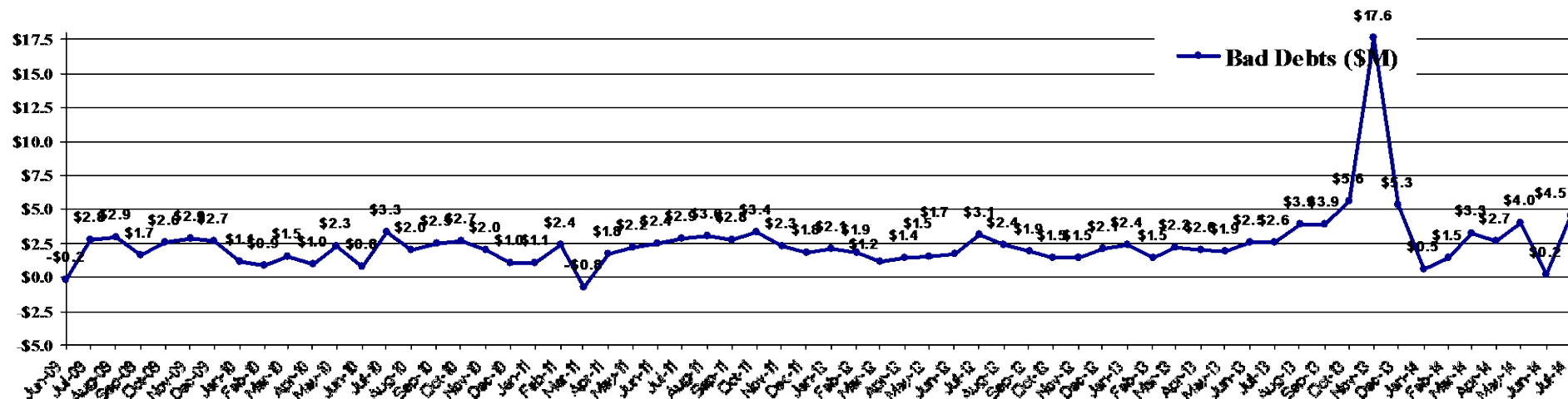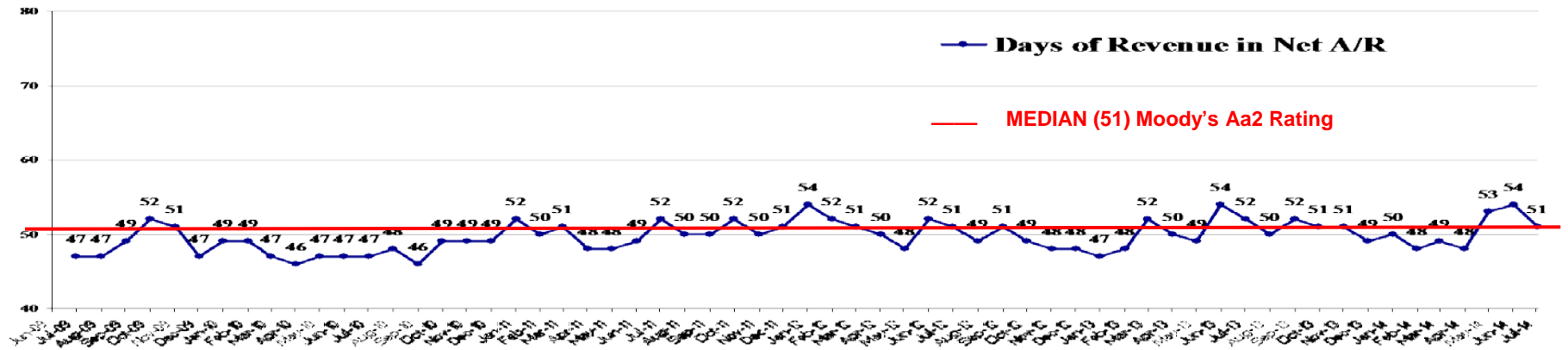
UIHC Comparative Financial Results

July 2014

Dollars in Thousands

NET REVENUES:	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget	Variance to Prior Year	% Variance to Prior Year
Patient Revenue	$99,807	$97,466	$93,197	$2,342	2.4%	$6,611	7.1%
Other Operating Revenue	4,281	4,370	4,199	(89)	-2.0%	82	2.0%
Total Revenue	**$104,089**	**$101,836**	**$97,395**	**$2,253**	**2.2%**	**$6,693**	**6.9%**

EXPENSES:	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget	Variance to Prior Year	% Variance to Prior Year
Salaries and Wages	$50,801	$50,431	$49,516	$369	0.7%	$1,285	2.6%
General Expenses	42,802	43,540	39,738	(738)	-1.7%	3,064	7.7%
Operating Expense before Capital	$93,603	$93,972	$89,254	($369)	-0.4%	$4,349	4.9%
Cash Flow Operating Margin	**$10,485**	**$7,864**	**$8,141**	**$2,621**	**33.3%**	**$2,344**	**28.8%**
Capital- Depreciation and Amortization	6,427	6,720	6,032	(292)	-4.3%	396	6.6%
Total Operating Expense	$100,031	$100,691	$95,286	($661)	-0.7%	$4,745	5.0%

	Actual	Budget	Prior Year	Variance to Budget	% Variance to Budget	Variance to Prior Year	% Variance to Prior Year
Operating Income	**$4,058**	**$1,144**	**$2,110**	**$2,914**	**254.7%**	**$1,948**	**92.4%**
Operating Margin %	**3.9%**	**1.1%**	**2.2%**		**2.8%**		**1.7%**
Gain (Loss) on Investments	(376)	2,107	7,298	(2,482)	-117.8%	(7,674)	-105.2%
Other Non-Operating	(1,223)	(740)	(1,154)	(483)	-65.3%	(70)	-6.1%
Net Income	**$2,459**	**$2,511**	**$8,253**	**($52)**	**-2.1%**	**($5,794)**	**-70.2%**
Net Margin %	**2.4%**	**2.4%**	**8.0%**		**0.0%**		**-5.6%**

* Gain/(Loss) on Investments based on information available at close. Final investment return for this period is reflected in Fiscal Year to Date returns in the subsequent reporting cycle.

Strategic Plan Progress Report

Jean Robillard, MD
Vice President for Medical Affairs

UI Health Care Strategic Plan—FY 2014 - 2016

World Class People. World Class Medicine.

Mission
Changing Medicine. Changing Lives.

Vision
World Class People. World Class Medicine. For Iowa and the World.

Values
I CARE. Innovation, Collaboration, Accountability, Respect, Excellence.

Clinical Quality & Service Goal	Research Goal	Education Goal	People Goal	Diversity Goal	Growth and Finance Goal
Provide world class healthcare and service to optimize health for the people of Iowa and beyond.	Advance world class discovery through outstanding, innovative biomedical and health services research.	Develop world class health professionals and scientists through excellent, innovative and humanistic educational curricula for learners at every stage.	Foster a culture of excellence that values, engages and enables our workforce.	Create an environment of inclusion where individual differences are respected and all feel welcome.	Optimize a performance-driven business model that assures financial success.

Accountable Leaders

Clinical Quality & Service	Research	Education	People	Diversity	Growth and Finance
Ken Kates, Theresa Brennan, Kenneth Rempher, Scott Turner, Sabi Singh, Doug Van Daele	Debra Schwinn, Pat Winokur, Gary Rosenthal, Sharon Tucker	Debra Schwinn, Donna Hammond, Mark Wilson, Christopher Cooper, LouAnn Montgomery	Jana Wessels, Kenneth Rempher	Sherree Wilson & Jean Robillard (VPMA Cabinet)	Ken Fisher, Ken Kates, Debra Schwinn, Sabi Singh, Scott Turner

Strategies

Clinical Quality & Service
- QS1. Optimize patient safety
- QS2. Ensure accurate and complete coding of documentation
- QS3. Improve timely access to care
- QS4. Deliver consistent service excellence
- QS5. Design and implement innovative care models
- QS6. Lead efforts to improve health, access, quality and reduce fragmentation in the health care delivery system in collaboration with UI Health Alliance and other community partners
- QS7. Build and sustain programmatic priorities:
  - Cancer
  - Children's Services
  - Diabetes
  - Heart and Vascular
  - Neurosciences
  - Primary Care
  - Orthopedics
  - Transplant
  - Women's Health
  - Other emerging areas of clinical focus, including aging and age-related diseases
- QS8. Optimize UIP operational effectiveness locally with UIHC and across the Alliance

Research
- R1. Recruit, develop, and retain a diverse cadre of world-class investigators and support their academic development
- R2. Identify areas of excellence in basic research in which to prioritize future growth and development (neuroscience, diabetes, cardiopulmonary, genomics)
- R3. Expand existing research that disseminates and implements evidence-based practices into routine clinical practice settings and across UI Health Alliance
- R4. Integrate genomics with clinical care
- R5. Improve and grow scientific infrastructure including new cores
- R6. Nurture the development of high quality, high reward interdisciplinary scientific programs, especially those with potential for tech transfer and/or start-up companies
- R7. Strengthen informatics capabilities for all research areas
- R8. Collaborate with other UI Colleges and CTSA Consortium and UI Health Alliance in targeted areas to meet common goals
- R9. Strengthen enterprise research business model

Education
- E1. Complete roll-out of new innovative mechanism-based UME curriculum
- E2. Recruit, develop and retain diverse world class faculty, fellows, residents and students
- E3. Foster innovation through greater integration across the continuum of UME, OSCEP, GME, and CME
- E4. Limit medical student debt
- E5. Recognize and reward excellence in teaching; find creative ways to fund teaching
- E6. Cultivate critical thinking, an environment of curiosity and life-long learning, a spirit of inquiry, and a passion for excellence
- E7. Emphasize interprofessional education (IPE) across all health science professionals to improve patient care
- E8 Deepen academic training for clinicians through creative faculty/fellowships

People
- P1. Continue to develop talent within the organization and define performance expectations for all
- P2. Seek, hire and retain outstanding people including individuals from groups traditionally under-represented in academic medicine
- P3. Ensure that all UI Health Care employees receive appropriate training regarding organization's Mission, Vision, Values and Goals
- P4. Engage staff and encourage strong personal responsibility, accountability and empowerment directed toward achieving organizational goals
- P5. Promote programs that recognize and reward excellence
- P6. Foster an environment of continual learning, innovation and collaboration
- P7. Maintain Magnet recognition program designation to attract and retain a world class workforce
- P8. Develop and implement the IOM Future of Nursing recommendations appropriate to our workforce
- P9. Continue to develop infrastructure, technology and lean processes to support HR efforts
- P10. Support organizational capacity to transform and embrace change

Diversity
- D1. Foster a positive and welcoming environment by nurturing a culture of respect, inclusion and equal opportunity
- D2. Develop and implement 2014-2017 CCOM Strategic Diversity Plan
- D3. Provide a range of diversity education, cultural enrichment and acclimation programs for members of the UI Health Care community
- D4. Develop and implement innovative, effective recruiting and pipeline initiatives geared towards under-represented groups
- D5. Prepare to achieve compliance with LCME standards (IS-16, MS-8, ED-21, ED-22) related to diversity, inclusion and culturally responsive care for 2017 review
- D6. Each Accountable Leader will advance diversity in all strategies

Growth and Finance
- GF1. Complete evaluation of clinical programs based on all three missions and rank as to core, (basic), growth or marginal
- GF2. Develop and implement business model for long term growth of targeted clinical programs
- GF3. Develop and implement business model to support the evolving healthcare delivery system, including ACO's, risk sharing, gain sharing or bundled payments
- GF4. Maintain capital plan to address core strategies
- GF5. Develop and implement strategies to strengthen relationships with Critical Access Hospitals, their physicians and other key community providers and work collaboratively to improve health and lower costs for populations living in these communities
- GF6. Develop a culture of philanthropy within UI Health Care
- GF7. Increase number of lives in ACO products
- GF8. Increase Pediatric market share population in advance of Children's Hospital opening in targeted regions

Information Technology

Clinical Quality & Service
- Continue to develop the full capabilities of Epic to facilitate quality/safety and enhance professional and consumer relationships, including UI CareLink and MyChart
- Mobile technology
- Enhance sharing of clinical information with external providers
- Data warehousing capabilities incorporating external data
- Device integration into Epic

Research
- Develop the full capabilities of Epic to facilitate innovation in research
- Develop IT infrastructure necessary for ICORE (IT, EPIC across UI Health Alliance, business metrics, clinical outcomes, decision science, genomics, and comparative effectiveness)
- Develop robust informatics infrastructure in synergy with university initiatives

Education
- Develop the full capabilities of Epic to facilitate education
- Provide training and support for "learners" to understand and implement patient-centered care and service
- Provide tools for faculty to implement new teaching methods (availability of short podcasts from across the world, IT based testing, etc)

People
- Training and development
- Communications
- Policy and practice changes
- Compliance tracking

Diversity
- Web-based tools (self-audit, reporting progress on diversity initiatives, cultural competency resources, accreditation, etc.)
- Evaluate online tools/programs to facilitate cultural competency training and adopt one
- Track participation in diversity programs

Growth and Finance
- Data-driven business planning
- Robust financial and performance-reporting systems
- Data warehouse and analytical capabilities for ACOs and population health

Metrics

Clinical Quality & Service
- QS1
  - CMS Reportable Events
  - Adverse Drug Events
  - CLABSI, CAUTI, VAP & C-Diff Rates
  - CMS Core Measures
  - Mortality Index
  - Readmission Rate
  - Blood Management
  - Nurse Sensitive Indicators
- QS2
  - Case-weighted Documentation Opportunity Points (Carefx)
  - ICD-10 Provider Training Completion
- QS3
  - Clinic room utilization
  - Transfer Center – Average Placement Time
  - Percent of transfers coming through transfer center
  - Length of stay
  - Same day access
  - First-case on-time starts (Main OR)
  - % of total prescriptions filled by UIHC retail pharmacies
- QS4
  - Patient satisfaction (Likelihood to Recommend)
  - Staff satisfaction
  - Referring physician satisfaction
  - MyChart utilization
  - Meaningful Use (Stage 2)
- QS5
  - NCQA Medical Home certification
  - eHealth implemented in Critical Access Hospitals
- QS6
  - Quality and cost targets for Medicare, Medicaid and Wellmark ACOs
  - Clinical integration across the Alliance
  - UI CareLink in all Alliance and UI Health Network offices
  - # of HVHC projects implemented within UI Health Care & UI Health Alliance
- QS7
  - Volume, growth, outcomes and patient satisfaction indicators
- QS8
  - New structure and leadership in place

Research
- R1
  - Recruitment and retention of a diverse faculty as measured by annual demographic data on the composition of UI Health Care faculty
  - Increase in "optimal" ranking for the diversity recruitment and retention plan on NIH grant reviews
- R2
  - Percentage of NIH funded research effort directed toward stated research and clinical priorities/centers of excellence
- R3
  - # of grants funding translational research
  - Initiate & Staff ICORE
  - Number and dollar amount of clinical trials
- R4
  - Establish tissue procurement system
- R5
  - Complete Pappajohn Biomedical Discovery Building and occupy with strategic initiatives as part of the Pappajohn Biomedical Institute
  - New cores initiated
  - # of cores endowed
- R6
  - Number of patents, royalties, licensing agreements
  - Number of new start-ups
- R7
  - Increased participation in informatics education efforts at UME, GME and faculty level
  - Initiate joint degree programs and faculty fellowships in informatics
- R8
  - Number and dollar amount of program project and other collaborative grants
- R9
  - Number, dollar amount and percent of extramurally funded projects
  - Research revenue per net square foot
  - Percent of faculty salaries offset by grant support

Education
- E1
  - USMLE scores
  - Placements of graduates, short term and long term
  - National rankings of graduate programs and professional schools
  - Scholarship (e.g. publications, national presentations) regarding innovations in clinical learning environments &/or in UME/GME
- E2
  - # of hours/faculty devoted to education efforts as logged in participation database
  - Applications, admissions, and yield including increased GPA and MCAT scores and diversity of applicants and admitted students
  - % GME slots at UIHC filled with high quality residents
  - % CCOM students Match
  - Success in student diversity retention initiatives
  - Effectiveness of under-represented minority student scholarship program to participate in UIHC externships
  - Increase in positive data from OSAC-commissioned minority focus groups
- E3
  - Scholarship (e.g. publications, national presentations) regarding innovations in clinical learning environments &/or in UME/GME
  - % rating their overall evaluation as "very positive" on the annual Resident Survey conducted by ACGME
  - # UME curricular innovations adapted to GME needs
- E4
  - Annual student debt compared to national benchmarks and prior year
- E5
  - USMLE scores
  - % rating overall evaluation as "very positive" on the annual Resident Survey conducted by ACGME
  - Student evaluations of curriculum and instruction to include residents and fellows
  - Progress in effort to build infrastructure to support comprehensive physician professional development initiatives
  - # of endowed professorships for residency Program Directors
- E6
  - % rating their overall evaluation as "very positive" on the annual Resident Survey conducted by ACGME
- E7
  - Best-practice examples of IPP in clinical settings that reinforce IPE
  - Verification of proficiency of resident/fellow/faculty physicians to perform invasive procedures in a standardized and safe manner

People
- P1
  - % performance appraisals completed
- P2 & P10
  - Time to hire
- P3
  - % staff completing orientation within 60 days of hire
  - % staff trained in Service Excellence
- P4
  - Hours worked vs. hours paid
- P6
  - # of leaders completing Dartmouth program and deployed to existing or new initiatives
- P7
  - Magnet status maintained
- P8
  - # staff enrolled in RN to BSN and other tuition support programs
- P9
  - Compliance tracking system developed and implemented

Diversity
- D1
  - 2012 climate survey for MD students completed and reported
  - Enterprise-wide self-audit tool completed
  - Data from focus groups compiled and reported in aggregate format
  - Evaluation of Human Rights Week completed, and results used to guide future direction
- D2
  - On-line diversity reporting tool "live" and in use by all departments
- D3
  - % medical educators possessing skills and knowledge to infuse cultural competence in the curriculum and teaching methods
  - Patient satisfaction surveys measuring healthcare providers delivering ongoing culturally competent and sensitive patient care
  - Culturally responsive healthcare e-learning tool(s) adopted and used by UIHC community
  - % of high participant satisfaction with, and effective of, sessions and content of the Culturally Responsive Healthcare in Iowa conference
- D4
  - Diversity among MD applicants and matriculants
  - Applicants from historically underrepresented populations to Biosciences/Biomedical graduate programs
- D5
  - Full compliance with LCME diversity, inclusion and cultural competence standards

Growth and Finance
- GF1
  - Recruitment timing
- GF2
  - Operating margin established for each business unit
  - Flexible budget variance of less than 2.0% for each business unit
  - Volume metrics for each business unit including at least inpatient admissions, days, ALOS vs. expected (expressed as an index), surgical cases, ambulatory visits for each budget year
  - Quality of service metrics including, room turns for clinics, wait time for new patients in clinics, others (TBD) for each budget year
  - CARTS productivity for each clinical department
- GF3
  - Bond rating metrics, days cash on hand, operating margin, current ratio, debt to capital, others (TBD) to maintain current rating from each agency
  - Long range business model updated yearly
  - Shared savings for ACO programs
- GF4
  - Facility projects on budget and schedule
- GF5
  - UI Health Network implemented with targeted services in targeted areas
- GF6
  - Philanthropic dollars received
  - % UI Health Care faculty/staff who give to UI
- GF7
  - % out of state migration for tertiary care
  - % market share of tertiary care in state

September 2014

**UNIVERSITY OF IOWA
HEALTH CARE**

*Changing Medicine.
Changing Lives.®*

Changing Medicine.

. . .through pioneering discovery

. . .innovative inter-professional education

*. . .delivery of superb clinical care and an
       extraordinary patient experience*

*. . .in a multi-disciplinary, collaborative,
       team-based environment.*

Changing Lives.

. . .preventing and curing disease

. . .improving health and well-being

. . .assuring access to care

. . .for people in Iowa and throughout the world.

World-class people.

World-class medicine.

For Iowa and the world.

World-class people.

. . .building on our greatest strength.

World-class medicine.

. . . creating a new standard of excellence in integrated patient care, research and education.

For Iowa and the world.

. . .making a difference in quality of life and health for generations to come.

Values

I pledge my individual commitment to UI Health Care's values because I CARE about:

*I*nnovation

We seek creative ways to solve problems.

*C*ollaboration

We believe teamwork is the best way to work.

*A*ccountability

We behave ethically, act openly and with integrity in all that we do, taking responsibility for our actions.

*R*espect

We honor diversity and recognize the worth and dignity of every person.

*E*xcellence

We strive to achieve excellence in all that we do.

Goals

CLINICAL QUALITY & SERVICE

RESEARCH

EDUCATION

PEOPLE

DIVERSITY

GROWTH & FINANCE

1. Provide world-class health care and service to optimize health for the people of Iowa and beyond.

2. Advance world-class discovery through outstanding, innovative biomedical and health services research.

3. Develop world-class health professionals and scientists through excellent, innovative and humanistic educational curricula for learners at every stage.

4. Foster a culture of excellence that values, engages and enables our workforce.

5. Create an environment of inclusion where individual differences are respected and all feel welcome.

6. Optimize a performance-driven business model that assures financial success.

Strategies—Clinical Quality & Service

CLINICAL QUALITY & SERVICE	
QS1	Optimize patient safety
QS2	Ensure accurate and complete coding of documentation
QS3	Improve timely access to care
QS4	Deliver consistent service excellence
QS5	Design and implement innovative care models
QS6	Lead efforts to improve health, access, quality and reduce fragmentation in the health care delivery system in collaboration with UI Health Alliance and other community partners
QS7	Build and sustain programmatic priorities (cancer, children's services, diabetes, heart & vascular, neurosciences, primary care, orthopaedics, transplant, women's health, and other emerging areas of clinical focus, including aging and age-related diseases)
QS8	Optimize UIP operational effectiveness locally with UIHC and across the UI Health Alliance

Strategies—Research

RESEARCH	
R1	Recruit, develop, and retain a diverse cadre of world-class investigators and support their academic development
R2	Identify areas of excellence in basic research in which to prioritize future growth and development (neuroscience, diabetes, cardiopulmonary, genomics)
R3	Expand existing research that disseminates and implements evidence-based practices into routine clinical practice settings and across UI Health Alliance
R4	Integrate genomics with clinical care
R5	Improve and grow scientific infrastructure including new cores
R6	Nurture the development of high quality, high reward interdisciplinary scientific programs, especially those with potential for tech transfer and/or start-up companies
R7	Strengthen informatics capabilities for all research areas
R8	Collaborate with other UI Colleges, CTSA Consortium and UI Health Alliance in targeted areas to meet common goals
R9	Strengthen enterprise research business model

Strategies—Education

EDUCATION	
E1	Complete roll-out of new innovative mechanism-based UME curriculum
E2	Recruit, develop and retain diverse world class faculty, fellows, residents and students
E3	Foster innovation through greater integration across the continuum of UME, OSCEP, GME, and CME
E4	Limit medical student debt
E5	Recognize and reward excellence in teaching; find creative ways to fund teaching
E6	Cultivate critical thinking, an environment of curiosity and life-long learning, a spirit of inquiry, and a passion for excellence
E7	Emphasize interprofessional education (IPE) across all health science professionals
E8	Deepen academic training for clinicians through creative faculty/fellowships

Strategies—People

PEOPLE	
P1	Continue to develop talent within the organization and define performance expectations for all
P2	Seek, hire and retain outstanding people including individuals from groups traditionally under-represented in academic medicine
P3	Ensure that all UI Health Care employees receive appropriate training regarding organization's Mission, Vision, Values and Goals
P4	Engage staff and encourage strong personal responsibility, accountability and empowerment directed toward achieving organizational goals
P5	Promote programs that recognize and reward excellence
P6	Foster an environment of continual learning, innovation and collaboration
P7	Maintain Magnet recognition program designation to attract and retain a world-class workforce
P8	Develop and implement the Institute of Medicine *Future of Nursing* recommendations appropriate to our workforce
P9	Continue to develop infrastructure, technology and lean processes to support HR efforts
P10	Support organizational capacity to transform and embrace change

Strategies—Diversity

DIVERSITY	
D1	Foster a positive and welcoming environment by nurturing a culture of respect, inclusion and equal opportunity
D2	Develop and implement 2014-2017 CCOM Strategic Diversity Plan
D3	Provide a range of diversity education, cultural enrichment and acclimation programs for members of the UI Health Care community
D4	Develop and implement innovative, effective recruiting and pipeline initiatives geared towards under-represented groups
D5	Compliance with Liaison Committee on Medical Education standards (IS-16, MS-8, ED-21, ED-22) related to diversity, inclusion and culturally responsive care for 2017 review
D6	Each Accountable Leader will advance diversity in all strategies

Strategies—Growth & Finance

GROWTH & FINANCE	
GF1	Complete evaluation of clinical programs based on all three missions and rank as to core (basic), growth or marginal
GF2	Develop and implement business model for long-term growth of targeted clinical programs
GF3	Develop and implement business model to support the evolving healthcare delivery system, including ACOs, risk sharing, gain sharing or bundled payments
GF4	Maintain capital plan to address core strategies
GF5	Develop and implement strategies to strengthen relationships with Critical Access Hospitals, their physicians and other key community providers and work collaboratively to improve health and lower costs for populations living in these communities
GF6	Develop a culture of philanthropy for the system
GF7	Increase number of lives in ACO products
GF8	Increase Pediatric market share population in advance of Children's Hospital opening in targeted regions

Information Technology

CLINICAL QUALITY & SERVICE

- Continue to develop the full capabilities of Epic to facilitate quality/safety and enhance professional and consumer relationships, including UI CareLink and MyChart
- Mobile technology
- Enhance sharing of clinical information with external providers
- Data warehousing capabilities incorporating external data
- Device integration into Epic

RESEARCH

- Develop the full capabilities of Epic to facilitate innovation in research.
- Develop IT infrastructure necessary for ICORE (IT, EPIC across UI Health Alliance, business metrics, clinical outcomes, decision science, genomics, and comparative effectiveness).
- Develop robust informatics infrastructure in synergy with university initiatives.

EDUCATION

- Develop the full capabilities of Epic to facilitate education.
- Provide training and support for "learners" to understand and implement patient-centered care and service.
- Provide tools for faculty to implement new teaching methods (availability of short podcasts from across the world, IT based testing, etc).

PEOPLE

- Training and development
- Communications
- Policy and practice changes
- Compliance tracking

DIVERSITY

- Web-based tools (self-audit, reporting progress on diversity initiatives, cultural competency resources, accreditation, etc.)
- Online tools/programs to facilitate cultural competency training
- Track participation in diversity programs

GROWTH & FINANCE

- Data-driven business planning
- Robust financial and performance-reporting systems
- Data warehouse and analytical capabilities for ACOs and population health

Scorecard – Overall FY14 Performance

UI Health Care Strategic Plan Scorecard	FY13 Actual	FY14 Target	FY14 Actual	Upshot
OVERALL				
Honor Roll for Best Hospitals by US News and World Report	Ranked in 6 specialties	Improve	Ranked in 9 specialties	Achieved
Children's Hospitals by US News and World Report	Ranked in 7 specialties	Improve	Ranked in 8 specialties	Achieved
Public Medical Schools ranking in Research by US News and World Report	10th	Improve	11th	Not achieved
Overall Medical School ranking in Research by US News and World Report	28th	Improve	29th	Not achieved
Public Medical Schools Primary Care ranking by US News and World Report	14th	Improve	14th	Maintained
Overall Medical Schools Primary Care ranking by US News and World Report	16th	Improve	16th	Achieved
NIH Funding among Public Medical Schools	17th (FY12)	Improve	19th (FY13)*	Not achieved
Moody's Bond Rating	Aa2	Maintain Aa2	Aa2	Achieved

*FY14 results not yet released

Scorecard – Clinical Quality & Service FY14 Performance

UI Health Care Strategic Plan Scorecard	FY13 Actual	FY14 Target	FY14 Actual	Upshot
CLINICAL QUALITY & SERVICE				
Patient Satisfaction: a) Adult b) Pediatric c) Outpatient	a) 48 / 48 b) 59 / 75 c) 31 / 34 (FY13) / (Q4FY13)	90th Percentile	a) 50 / 54 b) 30 / 51 c) 34 / 38 (FY14) / (Q4FY14)	a) Improved b) Declined c) Improved
CMS Core Measure – Heart Failure Discharge Instructions	97% (Q3, FY13)	>97%	Metric was discontinued after Q1 2014 at that time it was 98%	n/a
Operating Room – First case on-time starts (Main OR)	93%	95%	93.29%	Improved
Transfer Center – Avg time from initial call to patient placement confirmation	82 minutes	80 minutes	70 minutes	Achieved
Readmission Rate (UHC All-cause Measure - Adult and Children)	11.75%	10.38%	11.62%	Improved
Length of Stay Index (excl. Outliers, Psych, Normal Newborn, & Neonates) (UHC Measure)	1.05	≤1.0	1.04	Improved

Scorecard – Research
FY14 Performance

UNIVERSITY OF IOWA HEALTH CARE

UI Health Care Strategic Plan Scorecard	FY13 Actual	FY14 Target	FY14 Actual	Upshot
RESEARCH				
Total extramural funding	$225.4M	Total extramural funding increases or decreases by the same percentage as the NIH budget for FY14	$203.6M	Not achieved
Research revenue per net square foot	$473	Maintain	$427	Not achieved
Percent of extramurally funded faculty research effort	22%	Maintain	19.92%	Not achieved

Scorecard – Education
FY14 Performance

UI Health Care Strategic Plan Scorecard	FY13 Actual	FY14 Target	FY14 Actual	Upshot
EDUCATION				
Number of applications for medical school	3,564	Maintain	3,502*	Not achieved
Mean MCAT scores: Verbal Reasoning, Physical Sciences, Biological Sciences	32.4	Maintain	32.3	Not achieved
GPA of accepted applicants	3.75	Maintain	3.76	Achieved
Limit % increase in annual student medical debt compared to national benchmarks and prior year	UI Class of 2012 Average $155K; National Average, All Schools $148K	Reduce debt to below national average	UI Class of 2013 Average $156K; National Average, All Schools $150K	Not achieved

Minimum GPA for applicants increased to 3.0, which resulted in fewer—but more highly qualified—applicants.

Scorecard – People
FY14 Performance

UI Health Care Strategic Plan Scorecard	FY13 Actual	FY14 Target	FY14 Actual	Upshot
PEOPLE				
Develop and implement plan for improved on-boarding of staff - 100% of staff completing orientation within 60 days of hire.	100%	Maintain	100% maintained	Achieved
Develop and deliver Service Excellence training to all staff	62% trained	70% trained	80% trained	Achieved
% of Performance Appraisals completed	100%	Maintain	100% maintained	Achieved
% of Sexual Harassment Training Completed	100%	Maintain	100% maintained	Achieved
Train staff and supervisors in the use of My UI Career Goal Setting performance management system	Did not exist in FY13	Train 100% of non-organized staff on usage of My UI Career	70% trained*	Achieved

Requirement changed mid-year from required to option.

Scorecard – Diversity
FY 14 Performance

UI Health Care Strategic Plan Scorecard	FY13 Actual	FY14 Target	FY14 Actual	Upshot
DIVERSITY				
Develop and implement 2014-2017 CCOM Strategic Diversity Plan	New for FY14	Achieve	Plan developed & implementation in process, incl. adoption of CultureVision.	Achieved
Provide a range of diversity education, cultural enrichment and acclimation programs for members of the UI Health Care community	New for FY14	Achieve	Comprehensive array of events & activities sponsored, including first Culturally Responsive Health Care in Iowa conference.	Achieved
Develop and implement innovative, effective recruiting and pipeline initiatives geared towards under-represented groups	New for FY14	Achieve	Multiple programs implemented, including Physician Shadowing Program.	Achieved
Each Accountable Leader will advance diversity in all strategies	New for FY14	Achieve	Diversity and inclusion considered in development and implementation of strategies across all pillars.	Achieved

Scorecard – Growth and Finance FY14 Performance

UI Health Care Strategic Plan Scorecard	FY13 Actual	FY14 Target	FY14 Actual	Upshot
GROWTH & FINANCE				
Admissions (excl. Normal Newborn and OP Observation)	30,334	31,199	30,762	Achieved
UIHC Operating Margin %	3.5%	3.0%	4.6%	Achieved
UIP Operating Margin %	-2.0%	0%	1.2%	Achieved
Outpatient Clinic Visits (including ETC and Hosp Dentistry)	857,187	877,915	867,591	Achieved
Surgical Cases (inpatient and outpatient)	28,663	29,453	29,180	Achieved
Philanthropic goal of $500M by the end of FY14	$68M	$50M needed to reach $500M target	$70m	Achieved

Scorecard – Overall
FY15 Targets

UNIVERSITY OF IOWA HEALTH CARE

UI Health Care Strategic Plan Scorecard	FY14 Actual	FY15 Target
OVERALL		
Honor Roll for Best Hospitals by US News and World Report	Ranked in 9 specialties	Improve
Children's Hospitals by US News and World Report	Ranked in 8 specialties	Improve
Public Medical Schools ranking in Research by US News and World Report	11th	Improve
Overall Medical School ranking in Research by US News and World Report	29th	Improve
Public Medical Schools Primary Care ranking by US News and World Report	14th	Improve
Overall Medical Schools Primary Care ranking by US News and World Report	16th	Improve
NIH Funding among Public Medical Schools	19th (FY13)	Improve
Moody's Bond Rating	Aa2	Maintain Aa2

Scorecard – Clinical Quality & Service FY15 Targets

UI Health Care Strategic Plan Scorecard	FY14 Actual	FY15 Target
CLINICAL QUALITY & SERVICE		
Patient Satisfaction: a) Adult b) Pediatric c) Outpatient	a) 50 / 54 b) 30 / 51 c) 34 / 38 (FY14) / (Q4FY14)	90th Percentile
HAI reduction: C diff infection rates	1.28/1000 patient days	Less than 1.0/1000 patient days
Operating Room – First case on-time starts (Main OR)	93% (FY14)	95%
Access; % New patients seen within 7 days of request	41%	50%
Readmission Rate (UHC All-cause Measure - Adult and Children)	11.62% (FY14)	10.38%
Length of Stay Index (excl. Outliers, Psych, Normal Newborn, & Neonates) (UHC Measure)	1.04 (FY14)	≤1.0

Scorecard – Research
FY15 Targets

UI Health Care Strategic Plan Scorecard	FY14 Actual	FY15 Target
RESEARCH		
Total extramural funding	$203.6M	Total extramural funding increases or decreases by the same percentage as the NIH budget for FY15
Research revenue per net square foot	$427	Maintain
Percent of extramurally funded faculty research effort	19.9%	Maintain

Scorecard – Education FY15 Targets

UI Health Care Strategic Plan Scorecard	FY14 Actual	FY15 Target
EDUCATION		
Number of applications for medical school	3,502	Maintain
Mean MCAT scores: Verbal Reasoning, Physical Sciences, Biological Sciences	32.3	Maintain
GPA of accepted applicants	3.76	Maintain
Limit % increase in annual student medical debt compared to national benchmarks and prior year	UI Class of 2013 Average $156K; National Average, All Schools $150K	Reduce UI medical student debt to below national average

Scorecard – People
FY15 Targets

UI Health Care Strategic Plan Scorecard	FY14 Actual	FY15 Target
PEOPLE		
Develop and implement plan for improved on-boarding of staff - 100% of staff completing orientation within 60 days of hire.	100%	100%
Develop and deliver Service Excellence training to all staff	80% trained	85%% trained
% of Performance Appraisals completed	100%	100%
% of Sexual Harassment Training Completed	100%	100%
Participate in 2014 Working at Iowa Survey (measuring staff satisfaction)	Did not exist in FY13	65% (UI Health Care)

Scorecard – Diversity
FY15 Targets

UI Health Care Strategic Plan Scorecard	FY14 Actual	FY15 Target
DIVERSITY		
Each department will develop a diversity plan and accompanying goals which adhere to and support the overall UIHC and CCOM Diversity Plan/Roadmap.	All departmental plans completed and entered into Diversity Goal reporting site.	Updated plans and goals fully implemented by end of June 2015.
Launch CultureVision to UIHC community.	CultureVision agreement in place and implementation plan developed.	CultureVision is fully implemented, including Ambassador training for 100 employees.
Develop and/or participate in outreach, pipeline and/or recruitment initiatives for persons from populations underrepresented in medicine and/or biomedical research.	Design and implement minimum of two outreach/pipeline programs and participate in a minimum of four recruitment events or programs.	Programs are completed and outcomes are reported.
Each DEO will specify the metrics to be used to measure achievement of diversity goals.	Did not exist in FY14	Diversity goals (with accompanying metrics) achieved reported via DEO metric reporting site by May 2015.

Scorecard – Growth and Finance
FY15 Targets

UI Health Care Strategic Plan Scorecard	FY14 Actual	FY15 Target
GROWTH & FINANCE		
Admissions (excl. Normal Newborn and OP Observation)	30,762	31,821
UIHC Operating Margin %	4.6%	3.0%
UIP Operating Margin %	1.2%	2.35%
Outpatient Clinic Visits (including ETC and Hosp Dentistry)	867,591	870,801
Surgical Cases (inpatient and outpatient)	29,180	30,653
Philanthropic goal of $703.5M by the end of CY16	$95M*	$72M

At close of Iowa First Campaign, 12/31/13.

Faculty Presentation:
The Beginning of the End of Preeclampsia?

Mark K. Santillan, MD
Assistant Professor, Department of Obstetrics & Gynecology

Justin L. Grobe, PhD, FAHA
Assistant Professor, Department of Pharmacology

Tech Transfer: Preeclampsia

Dr. Justin L. Grobe, PhD

- **PhD**, Pharmacodynamics, University of Florida, Gainesville (UFL)

- **Postdoc Fellowships**, Physiology & Functional Genomics, UFL Medicine; Internal Medicine & Pharmacology, UI CCOM

Dr. Mark K. Santillan, MD

- **MD**, Loyola University Stritch School of Medicine, Maywood, IL

- **Residency**, OB-Gyn, Loyola University Medical Center, Maywood, IL

- **Fellowship**, Maternal Fetal Medicine, University of Iowa Hospitals and Clinics

Preeclampsia in Iowa: One Patient's Story

October 2012

September 2012

Easter 2014

The Problem(s) with Preeclampsia

- **4,000 cases/year in Iowa**

- **500,000 cases/year in U.S.A.**

- **100,000 maternal deaths/year**

- **500,000 fetal & newborn deaths/year**

- 8x higher incidence than heart attack

- 25x higher incidence than prostate cancer

- 50x higher incidence than colon cancer

Originally described by Hippocrates… 2,400 years ago

Still today:
- No Diagnostic Test
- No Animal Models
- No Treatments

New Ideas from New Collaborations

UNIVERSITY OF IOWA HOSPITALS & CLINICS
University of Iowa Health Care
UI Women's Health

UNIVERSITY OF IOWA CARVER COLLEGE OF MEDICINE
University of Iowa Health Care
Department of Pharmacology

Mark K. Santillan, MD

High Risk Obstetrics / Maternal Fetal Medicine

Expert in Preeclampsia & Clinical/Translational Studies

Justin L. Grobe, PhD

Pharmacology & Animal Physiology

Expert in Neural Control of Blood Pressure & Animal Models

Collecting and saving tissues and data from Iowan pregnancies

- 1487 women consented
- 2171 blood samples
- 425 placentas
- Amniotic fluid
- Cord blood
- Urine

UNIVERSITY OF IOWA
HEALTH CARE

Maternal plasma marker for secretion of AVP (Copeptin)
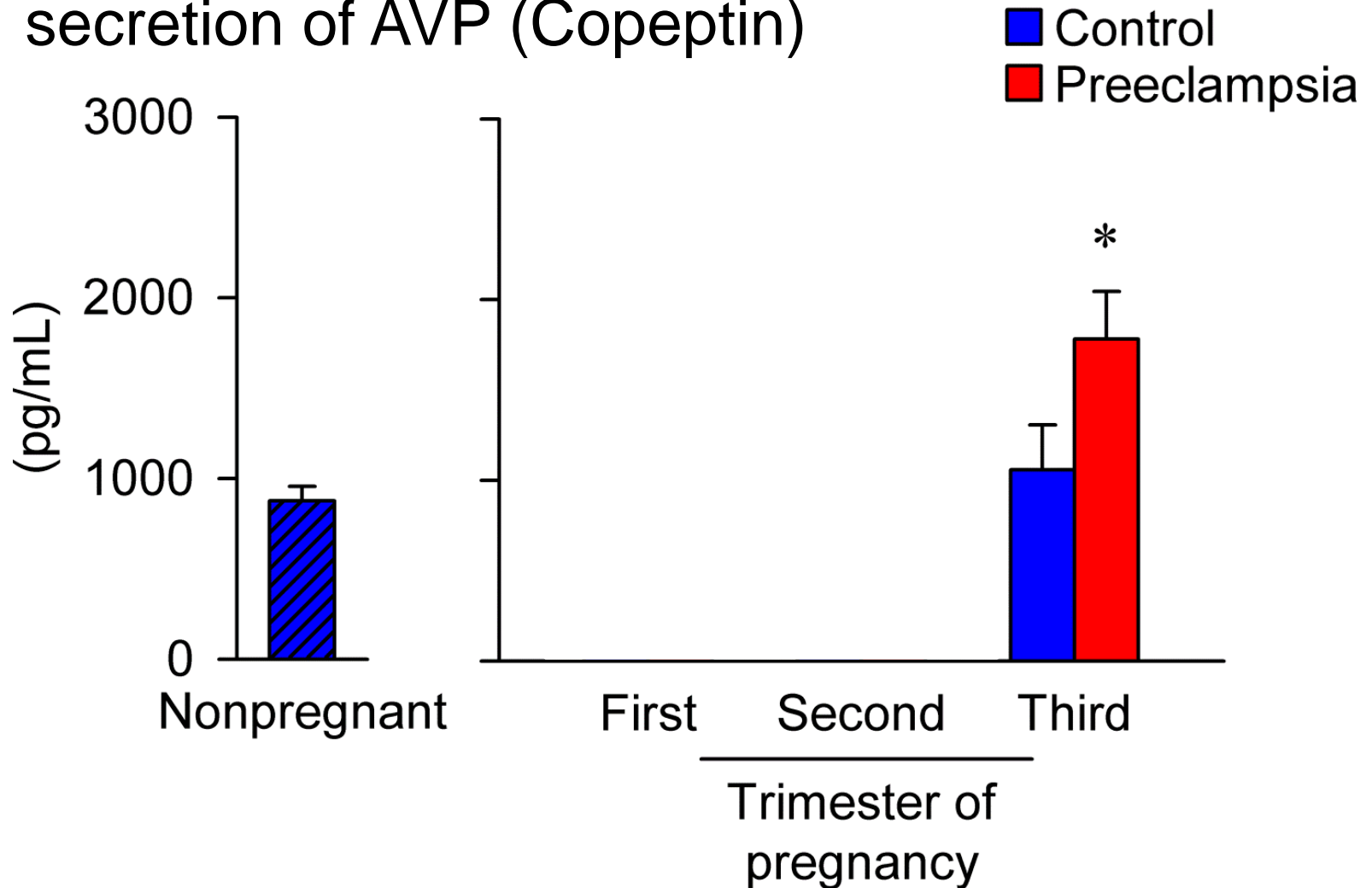
Vasopressin Can Cause Preeclampsia
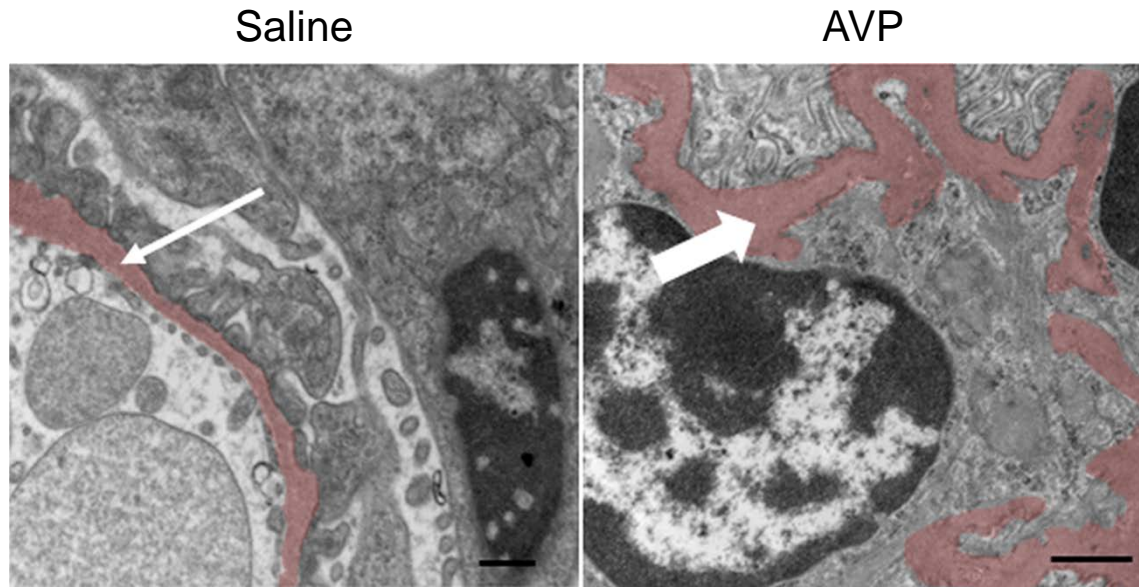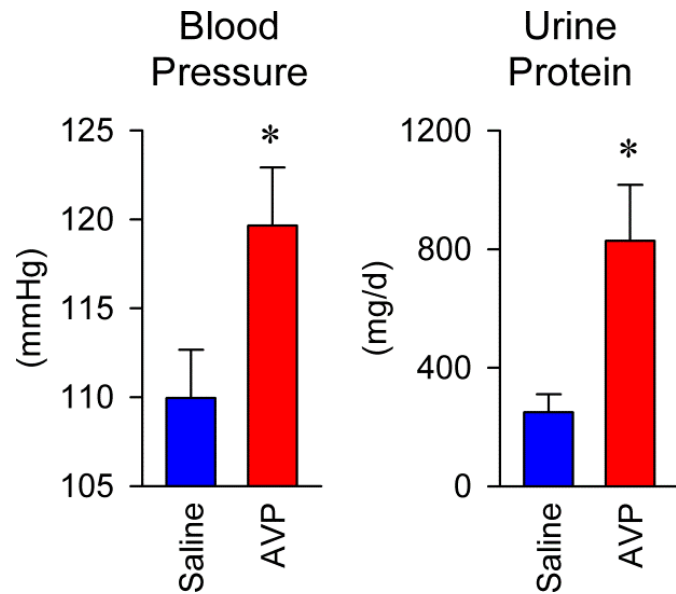
Renal glomerular endotheliosis
(Images by electron microscopy; bar = 500 nanometers)

- Infusion sufficient to cause preeclampsia in mice

- Establishes first and only animal model of early-disease pathogenesis

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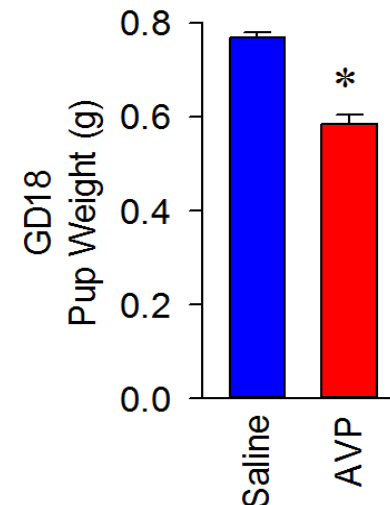
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Obstetrician	*Clinical Bank & Molecular Biology*	*Biostatistics*	*Pathology*	*Pharmacology*

Population

Bedside   **Bench**
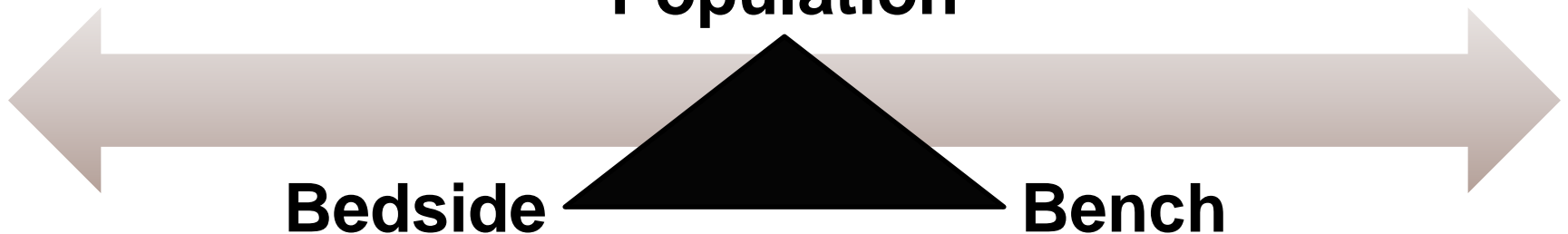
Novel Early Diagnostic Test
[Patent: Feb 2014]

First Early-Pathogenesis Animal Model
[Published: July 2014]

**Multiple, New Drug
Targets Identified**
[Patent: Feb 2014]